

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TENNESSEE
AT KNOXVILLE

UNITED STATES OF)
AMERICA and KNOX)
COUNTY, TENNESSEE, *ex rel*,)
LYNNE LIDDINGTON,)
DIRECTOR OF AIR QUALITY)
MANAGEMENT FOR KNOX)
COUNTY, TENNESSEE,)
Plaintiffs,)
v.)
CEMEX, INC., CEMEX)
CONSTRUCTION MATERIALS)
ATLANTIC, LLC and CEMEX)
CONSTRUCTION MATERIALS)
SOUTH, LLC,)
Defendants.)
_____)

NO: 3:16-cv-471

CONSENT DECREE

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WHEREAS, Plaintiff, the United States of America, on behalf of the United States Environmental Protection Agency (herein “U.S. EPA”) has, simultaneously with the lodging of this Consent Decree, filed a Complaint against Defendants Cemex, Inc., Cemex Construction Materials Atlantic, LLC (“Cemex Atlantic”) and Cemex Construction Materials South, LLC (“Cemex South”) (collectively “Named Defendants”), pursuant to Sections 113(b) and 167 of the Clean Air Act (“Clean Air Act,” “CAA,” or “Act”), 42 U.S.C. §§ 7413(b) and 7477, for injunctive relief and the assessment of civil penalties for violations of one or more of the following statutory and regulatory requirements of the Act at Cemex Atlantic’s Knoxville, Tennessee Portland cement plant and at Cemex South’s Odessa, Texas Portland cement plant with respect to emissions of nitrogen oxides (NO_x): the Prevention of Significant Deterioration (“PSD”) provisions of the Act, 42 U.S.C. §§ 7470-7492; the federally-approved and enforceable state implementation plans (“SIPs”), which incorporate and/or implement the above-listed federal PSD requirements; Title V of the Act, 42 U.S.C. §§ 7661-7661f; and Title V’s implementing federal and state regulations;

WHEREAS, Knox County, Tennessee, *ex rel* Lynne Liddington by the authority granted by the Code of Knox County, Tennessee, and pursuant to the laws of the State of Tennessee, has joined as a Co-Plaintiff;

WHEREAS, U.S. EPA has provided notice of the violations alleged herein to the Named Defendants and to each of the states where Named Defendants’ Facilities identified in the Complaint are located, pursuant to Section 113(a) of the Act, 42 U.S.C. § 7413(a), and Named Defendants stipulate that they have received actual notice of the violations alleged in the Complaint and that they do not contest the adequacy of the notice provided;

WHEREAS, the United States has provided notice of the commencement of this action to each state where a Portland cement plant identified in the Complaint is located, in accordance with Section 113(b) of the Act, 42 U.S.C. § 7413(b);

WHEREAS, Named Defendants deny the allegations of the Complaint and do not admit that they have any liability to the United States or Knox County for civil penalties or injunctive relief arising out of the transactions and occurrences alleged in the Complaint;

WHEREAS, Cemex South also owns and operates a Portland cement plant in New Braunfels, Texas;

WHEREAS, Cemex Southeast, LLC (“Cemex Southeast”) is not a Named Defendant and owns and operates a Portland cement plant in Demopolis, Alabama;

WHEREAS, Kosmos Cement Company (“Kosmos Cement”) is not a Named Defendant and owns and operates a Portland cement plant in Louisville, Kentucky;

WHEREAS, CEMEX, Inc. has at times relevant to the allegations in the Complaint owned or operated the Portland cement plants in Knoxville, Tennessee and Odessa, Texas;

WHEREAS, the Named Defendants, Cemex Southeast and Kosmos Cement (collectively, “Defendant”) agree to install Selective Non-Catalytic Reduction technology and to reduce emissions of nitrogen oxide (NO_x) and sulfur dioxide (SO₂) at their Portland cement plants in Knoxville, Tennessee; Louisville, Kentucky; Demopolis, Alabama; and in Odessa and

New Braunfels, Texas;

WHEREAS, the Louisville Metro Air Pollution Control District has joined the United States and Knox County (collectively, “Settling Governments”) in this Consent Decree;

WHEREAS, the Settling Governments and Defendant (collectively, the “Parties”) have agreed that this settlement is in the public interest and will result in air quality improvements in areas in which the above-described Portland cement plants are situated;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue), below, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction of the subject matter herein pursuant to Sections 113(b) and 167 of the Act, 42 U.S.C. §§ 7413(b) and 7477, and 28 U.S.C. §§ 1331, 1345, 1355 and 1367(a), and over the Parties. This Court also has jurisdiction over Cemex Construction Materials South, LLC, Cemex Southeast, LLC and Kosmos Cement Company, and their obligations in this Consent Decree pursuant to Fed. R. Civ. Proc. 19(a) and the All Writs Act, 28 U.S.C. § 1651. Venue is proper under Sections 113(b) and 304(c) of the Act, 42 U.S.C. §§ 7413(b) and 7604(c), and under 28 U.S.C. §§ 1391(b) and (c) and 1395(a) because some of the violations alleged in the Complaint are alleged to have occurred in, and Cemex Construction Materials Atlantic, LLC conducts business in, this District. Cemex, Inc. is a Louisiana corporation and was the owner and operator of the Knoxville and Odessa Portland cement plants during times relevant to the allegations of the Complaint. For purposes of this Consent Decree and the underlying Complaint, Defendant waives all objections and defenses it may have to the Court’s jurisdiction over this action, to the Court’s jurisdiction over Defendant, and to venue in this District.

2. For purposes of this Consent Decree, Named Defendants agree that the Complaint states claims upon which relief may be granted pursuant to Sections 113 and 167 of the Act, 42 U.S.C. §§ 7413 and 7477, and the Texas and Tennessee SIPs; and Title V of the Act, 42 U.S.C. §§ 7661-7661f; and Title V’s implementing federal and state laws and regulations.

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the Parties and any successors, assigns, or other entities or persons otherwise bound by law.

4. At least 30 Days prior to any transfer of ownership or operation of any Facility identified in Paragraph 7.p., Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States and any applicable

State Agency Settlor, in accordance with Section XVIII of this Consent Decree (Notices). Any attempt to transfer ownership or operation of any Facility without complying with this Paragraph constitutes a violation of this Consent Decree. No such transfer, whether in compliance with the notice requirements of this Paragraph or otherwise, shall relieve the Defendant of its obligation to ensure that the terms of the Consent Decree are implemented with respect to the transferred Facility or Facilities, unless:

- a. the transferee agrees in writing to undertake the obligations required by this Consent Decree and to be added as a Defendant in this action for the purpose of being bound by the applicable terms of this Decree;
- b. the transferee and/or Defendant provide the United States and any applicable State Agency Settlor with information sufficient to demonstrate that the transferee has the technical and financial means to comply with the obligations of this Decree;
- c. the United States and any applicable State Agency Settlor consent in writing to modification of the Consent Decree to substitute the transferee for the Defendant with respect to the Decree's obligations; and,
- d. the Court approves such substitution and enters a modification to this Decree.

5. Defendant shall provide a copy of this Consent Decree to all officers, employees, agents, and Contractors whose duties might reasonably include compliance with any provision of this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or Contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

7. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated by U.S. EPA pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. "30-Day Rolling Average Emission Limit" shall mean, with respect to any Kiln at a Facility, the maximum allowable rate of emission of a specified air pollutant from such Kiln, and shall be expressed as pounds of NO_x or SO₂ emitted per Ton of clinker produced. Compliance with the 30-Day Rolling Average Emission Limit shall be demonstrated in accordance with the definition of 30-Day Rolling Average Emission Rate;
- b. "30-Day Rolling Average Emission Rate" shall mean, with respect to any Kiln at a Facility, the rate of emission of a specified air pollutant from such Kiln, expressed as pounds of NO_x or SO₂ emitted per Ton of clinker produced, and calculated following

this procedure: first, sum the total pounds of the air pollutant in question emitted from the Kiln during that Operating Day and the previous twenty-nine (29) Operating Days as measured pursuant to Section VI.B (NO_x Continuous Emission Monitoring Systems) or Section VII.B. (SO₂ Continuous Emission Monitoring Systems) as applicable; second, sum the total Tons of clinker produced by the Kiln during the same Operating Day and previous 29 Operating Days; and third, divide the total number of pounds of the air pollutant emitted from the Kiln during the thirty (30) Operating Days by the total Tons of clinker produced by such Kiln during the same 30 Operating Days. A new 30-Day Rolling Average Emission Rate shall be calculated for each new Operating Day to demonstrate compliance with the 30-Day Rolling Average Emission Limit. In calculating each compliance determination of the 30-Day Rolling Average Emission Limit in accordance with this Paragraph 7.b, for NO_x or SO₂ at any Kiln, the total pounds of such air pollutant emitted from the Kiln during the applicable period (Operating Day or 30-Day Period) shall include all emissions of that pollutant from the subject Kiln that occur during the applicable period, including emissions during each Startup, Shutdown, or Malfunction;

- c. "Business Day" means any Day, except for Saturday, Sunday, and federal holidays;
- d. "CEMS" or "Continuous Emission Monitoring System" shall mean, for obligations involving NO_x and SO₂ under this Consent Decree, the total equipment and software required to sample and condition (if applicable), to analyze, and to provide a record of NO_x and SO₂ emission rates, and the raw data necessary to support the reported emission rates, and that have been installed and calibrated in accordance with 40 C.F.R. § 60.13 and 40 C.F.R. Part 60 Appendix B and Appendix F;
- e. "Commence" or "Commencement" of operation of SNCR shall mean to begin the introduction of the reagent employed by the SNCR;
- f. "Complaint" shall mean the complaint filed by the United States and Knox County, Tennessee in this action;
- g. "Consent Decree" or "Decree" shall mean this Consent Decree and any Appendix attached hereto, but in the event of any conflict between the text of this Decree and any Appendix, the text of this Decree shall control;
- h. "Continuously Operate" or "Continuous Operation" shall mean that when SNCR is used at a Kiln, it shall be operated at all times of Kiln Operation, excluding Malfunction of the SNCR, consistent with the technological limitations, manufacturers' specifications, and good engineering and maintenance practices for the SNCR and the Kiln (including, but not limited to, temperature limitations). For example, the requirement to Continuously Operate the SNCR does not require that the SNCR be operated under conditions where the Kiln has not reached or is no longer maintaining the minimum temperature for reagent injection;
- i. "Contractor" shall mean any person or entity hired by Defendant to perform services on its behalf necessary to comply with the provisions of this Consent Decree;

- j. "Date of Lodging of the Consent Decree" or "Date of Lodging" shall mean the date the Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Eastern District of Tennessee;
- k. "Day" shall mean a calendar day unless expressly stated to be a Business Day. In computing any period of time under this Consent Decree, where the last Day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next Business Day;
- l. "Defendant" shall mean Cemex, Inc., Cemex Construction Materials Atlantic, LLC, Cemex Construction Materials South, LLC, Cemex Southeast, LLC, and Kosmos Cement Company individually or collectively as the context requires;
- m. "Effective Date" shall have the definition provided in Section XIX;
- n. "Emission Limit" shall mean the maximum allowable Emission Rate of a specified air pollutant from any Kiln or Kilns and shall be expressed as pounds of NO_x or SO₂ emitted per Ton of clinker produced;
- o. "Emission Rate" for a specified air pollutant from any Kiln or Kilns shall mean the number of pounds of NO_x or SO₂ emitted per Ton of clinker produced, measured in accordance with this Consent Decree;
- p. "Facilities" shall mean the following five (5) Portland cement manufacturing facilities used for the production of Portland cement. Each of these Facilities may be referred to as a "Facility;"
 - (1) Knoxville Cement Plant, 6212 Cement Plant Road, Knoxville, Tennessee 37914;
 - (2) Louisville Cement Plant, 15301 Dixie Highway, Louisville, Kentucky 40272;
 - (3) Demopolis Cement Plant, 1617 Arcola Road, Demopolis, Alabama 36732;
 - (4) Odessa Cement Plant, 16501 West Murphy Street, Odessa, Texas 79766;
 - (5) New Braunfels Cement Plant, 2580 Wald Road, New Braunfels, Texas 78132;
- q. "Kiln" as used in this Consent Decree shall mean a device, including any associated preheater or precalciner devices, inline raw mills, inline coal mills or alkali bypasses, that produces clinker by heating limestone and other materials for subsequent production of Portland cement. The following are identified as the individual Kilns at each Facility:
 - (1) Knoxville, Tennessee: Knoxville Kiln 1;
 - (2) Louisville, Kentucky: Louisville Kiln 1;
 - (3) Demopolis, Alabama: Demopolis Kiln 1;
 - (4) Odessa, Texas: Odessa Kiln 1 (constructed 1959), Odessa Kiln 2 (constructed 1979), Odessa Kiln 3 (if constructed);
 - (5) New Braunfels, Texas: New Braunfels Kiln 1 (constructed 1980), New Braunfels Kiln 2 (constructed 2008);

- r. “Kiln Operation” shall mean any period when any raw materials are fed into the Kiln or any combustion is occurring in the Kiln;
- s. “Malfunction” as used in this Consent Decree shall have the same meaning as defined at 40 C.F.R. § 60.2;
- t. “National Ambient Air Quality Standards” or “NAAQS” shall mean national ambient air quality standards that are promulgated pursuant to Section 109 of the Act, 42 U.S.C. § 7409;
- u. “New Source Performance Standards” or “NSPS” shall mean those standards and emission limitations applicable to the emissions of NO_x and SO₂ from existing, modified or reconstructed Portland cement manufacturing facilities, codified at 40 C.F.R. Part 60, Subpart F;
- v. “NO_x” shall mean the pollutants oxides of nitrogen, measured in accordance with the provisions of this Consent Decree;
- w. “Non-attainment NSR” shall mean the non-attainment area New Source Review (NSR) program within the meaning of Part D of Subchapter I of the Act, 42 U.S.C. §§ 7501-7515, 40 C.F.R. Part 51, and any applicable State Implementation Plan;
- x. “Odessa Alternate Limit for NO_x Emissions” shall mean the 30-Day Rolling Average Emission Limit for NO_x related to Kiln 2 at the Odessa Facility as specified in Paragraph 21.a.
- y. “Operating Day” shall mean any Day on which Kiln Operation has occurred;
- z. “Operating Month” shall mean any calendar month in which Kiln Operation has occurred;
- aa. “Paragraph” shall mean a portion of this Decree identified by an Arabic numeral;
- bb. “Parties” shall mean the United States, the State Agency Settlers, and Defendant;
- cc. “Petition For Relief,” or “Petition,” shall mean the detailed report and supporting analysis of relevant data submitted under Paragraph 21 of the Consent Decree, where Defendant identifies conditions that make it technically unable to achieve the applicable 2.1 lbs. NO_x/Ton of clinker 30-Day Rolling Average Emission Limit at Odessa Kiln 2 and proposes an Odessa Alternate Limit for NO_x Emissions.
- dd. “Project Dollars” shall mean Defendant’s expenditures and payments incurred or made in carrying out the Environmental Mitigation Project identified in Section V and Appendix A (Environmental Mitigation Project) of this Consent Decree to the extent that such expenditures or payments both: (a) comply with the requirements set forth in Section V and Appendix A of this Consent Decree and (b) constituted Defendant’s direct payments for such projects, or Defendant’s external costs for

Contractors, vendors and equipment. Defendant shall not include its own personnel costs in overseeing the implementation of the Project as Project Dollars;

- ee. “PSD” shall mean the Prevention of Significant Deterioration program within the meaning of Part C of Subchapter I of the Act, 42 U.S.C. §§ 7470-7492, 40 C.F.R. Part 52, and any applicable and federally enforceable State Implementation Plan;
- ff. “Retire” or “Retirement” shall mean, with respect to any Kiln, (1) permanent Shutdown of the Kiln; and (2) the filing of an application in accordance with the applicable state’s SIP to remove permanently any legal authorization for further operation of the Kiln;
- gg. “Section” shall mean a portion of this Decree identified by a Roman numeral;
- hh. “Selective Non-Catalytic Reduction” or “SNCR” shall mean a pollution control system that injects an ammonia-based reagent into the gas stream without the use of a catalyst for the purpose of reducing NO_x emissions;
- ii. “Shutdown” shall mean the cessation of Kiln operation. Shutdown begins when feed to the Kiln is halted and ends when either continuous Kiln rotation ceases or when fuel or feed is reintroduced in the kiln resulting in Kiln Operation prior to cessation of Kiln rotation;
- jj. “SO₂” shall mean the pollutant sulfur dioxide, measured in accordance with the provisions of this Consent Decree;
- kk. “Startup” shall mean the time from when a shutdown Kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown Kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the Kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the Kiln design limitation rate, whichever occurs first;
- ll. “State Agency Settlor” shall mean any of the following: Knox County, Tennessee, *ex rel* Lynne Liddington by the authority granted by the Code of Knox County, Tennessee; and the Louisville Metro Air Pollution Control District;
- mm. “Title V permit” shall mean a permit required by and issued in accordance with the requirements of 42 U.S.C. §§ 7661-7661f;
- nn. “Ton” or “Tons” shall mean short ton or short tons;
- oo. “United States” shall mean the United States of America, acting on behalf of U.S. EPA; and,
- pp. “U.S. EPA” or “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

IV. CIVIL PENALTY

8. Within thirty (30) Days after the Effective Date Defendant shall pay to the United States the sum of \$1,290,000 as a civil penalty, together with interest accruing from the Date of Lodging, at the rate specified in 29 U.S.C. § 1961.

9. Defendant shall pay the civil penalty due at <https://www.pay.gov> or by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice account, in accordance with instructions provided to Defendants by the Financial Litigation Unit (“FLU”) of the United States Attorney’s Office for the Eastern District of Tennessee after the Effective Date. The payment instructions provided by the FLU will include a Consolidated Debt Collection System (“CDCS”) number, which Defendant shall use to identify all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to:

Mike F. Egan, General Counsel
CEMEX, Inc.
1501 Belvedere Road
West Palm Beach, FL 33406
megan@cemexusa.com
(561) 820-8449

on behalf of Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and EPA in accordance with Section XVIII (Notices).

At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; and (ii) to the United States via email or regular mail in accordance with Section XVIII and (iii) to EPA in accordance with Section XVIII. Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *U.S. et al. v. Cemex Inc. et al.* and shall reference the civil action number, CDCS Number and DOJ case number 90-5-2-1-09716.

10. Within thirty (30) Days after the Effective Date of this Consent Decree, Defendant shall pay to the Knox County Air Pollution Control District the sum of \$400,000 as a civil penalty, together with interest accruing from the Date of Lodging through the date of payment at the rate identified in Paragraph 8. Payment shall be made by delivery of a check made payable to Knox County, Tennessee and delivered by certified U.S. Mail to:

Daniel A. Sanders
Deputy Law Director, Knox County, Tennessee
400 Main Street, Suite 612
Knoxville, Tennessee 37902

11. Defendant shall not deduct any penalties paid under this Consent Decree pursuant to this Section or Section XII (Stipulated Penalties) in calculating federal or State or local income tax.

V. ENVIRONMENTAL MITIGATION

12. Defendant shall implement the Environmental Mitigation Project (“Project”) described in Appendix A to this Consent Decree:

13. Defendant shall maintain, and, within 30 Days upon U.S. EPA’s request, provide to U.S. EPA all documents that substantiate work completed on the Project in accordance with Section XVIII (Notices).

14. Defendant certifies that it is not otherwise required by law to perform the Project, that it is unaware of any other person who is required by law to perform the Project, and that it will not use the Project, or portion thereof, to satisfy any obligations that it may have under other applicable requirements of law.

15. Beginning twelve (12) months after the Effective Date of this Consent Decree, and continuing until completion of the Project, Defendant shall provide U.S. EPA with updates concerning the progress of the Project in the semi-annual reports required in Section XI (Reporting Requirements) of this Consent Decree. This shall include providing EPA with the results of the Energy Audits in Appendix A, upon completion.

16. Within ninety (90) Days following the completion of the Project, Defendant shall submit to U.S. EPA a report that documents the date the Project was completed, and the following:

- a. the anticipated annual emission reductions or other environmental benefits achieved (including the emission reductions achieved for NO_x); and,
- b. the Project Dollars incurred by Defendant in implementing the Project.

17. In connection with any communication to the public or to shareholders regarding its actions or expenditures relating in any way to the Project, Defendant shall include prominently in the communication the information that the actions and expenditures were required as part of a negotiated consent decree to resolve disputed allegations that it violated the Clean Air Act.

VI. NO_x CONTROL TECHNOLOGY, EMISSION LIMITS AND MONITORING REQUIREMENTS

A. NO_x Emission Limits and Control Technology

18. By no later than the applicable deadlines in Table 1 of this Paragraph 18, Defendant shall Commence Continuous Operation of SNCR technology at the Kilns:

TABLE 1:

Kiln	Deadline for Commencement of Continuous Operation of SNCR	30-Day Rolling Average Emission Limit (lbs. NO_x/Ton of clinker)
Knoxville Kiln 1	365 Days from Effective Date	2.3
Louisville Kiln 1	730 Days from Effective Date	2.1
Demopolis Kiln 1	730 Days from Effective Date	3.0
New Braunfels Kiln 1	365 Days from Effective Date	1.85
New Braunfels Kiln 2	365 Days from Effective Date	1.75
Odessa Kiln 1	(If applicable; deadline established per Paragraph 22)	5.3 (interim limit; compliance deadline of 180 Days from Effective Date)
Odessa Kiln 2	548 Days from Effective Date	2.1
Odessa Kiln 3	Within 60 Days after achieving the maximum production rate, but no later than 180 Days after initial Startup of the Kiln	1.5

19. Beginning on the Operating Day which is the 30th Operating Day after the deadline in Table 1 of Paragraph 18, Defendant shall demonstrate compliance with the applicable 30-Day Rolling Average Emission Limits in accordance with Paragraph 7.a., and thereafter Defendant shall continue to maintain such compliance, except with respect to Odessa Kiln 1, which shall commence compliance with an interim 30-Day Rolling Average Emission Limit of 5.3 lbs. NO_x/Ton of clinker, through combustion process optimization, no later than 180 days from Effective Date. In accordance with Paragraph 7.b., Defendant shall calculate a new 30-Day Rolling Average Emission Rate for each new Operating Day and shall maintain a record of each daily calculation of the rate for no less than five years.

20. Beginning on the first Operating Day after the Deadline in Table 1 applicable to a specified Kiln, Defendant shall Continuously Operate SNCR at that Kiln.

21. If Defendant seeks to demonstrate it is technically unable to achieve the 30-Day Rolling Average Emission Limit of 2.1 lbs. NO_x/ton of clinker for Odessa Kiln 2, it has until 365 Days following the deadline to commence Continuous Operation of SNCR to submit a Petition for Relief ("Petition") from the Odessa Kiln 2 NO_x Emission Limit, pursuant to the procedures set forth in Appendix B. Failure to submit a Petition for Relief within 365 Days will be deemed final consent to a 30-Day Rolling Average Emission Limit of 2.1 lbs. NO_x/Ton of clinker.

a. Any Petition submitted pursuant to Paragraph 21 must comply with the requirements of Appendix B. In the Petition, Defendant shall propose an Odessa Alternate Limit for NO_x Emissions for Odessa Kiln 2 that represents the lowest Emission Rate that the Kiln can achieve and maintain during normal source operations, calculated in accordance with Appendix B of the Consent Decree, based upon all available data and information collected during the preceding 365 Days. The proposed Odessa Alternate Limit for NO_x Emissions shall, at a minimum, reflect the Continuous Operation of the Optimized SNCR to control emissions from Odessa Kiln 2. In no event shall Defendant propose an Odessa Alternate Limit for NO_x Emissions greater than 3.1 lbs. NO_x/Ton of clinker. Upon request by EPA, Defendant shall submit any additional available data that EPA determines it needs to evaluate the demonstration.

b. If Defendant proposes an Odessa Alternate Limit for NO_x Emissions in the Petition for Relief from Odessa Kiln 2 NO_x Emission Limit, Defendant shall achieve and maintain a 30-Day Rolling Average Emission Rate of no greater than the proposed Odessa Alternate Limit for NO_x Emissions immediately upon submission of the Petition for Relief from Odessa Kiln 2 NO_x Emission Limit, and will be subject to stipulated penalties for the failure to do so pursuant to Section XII (Stipulated Penalties).

c. Following receipt of the Petition for Relief from Odessa Kiln 2 NO_x Emission Limit, EPA may, as a result of EPA's review of the Petition for Relief and other data submitted or developed pursuant to the Consent Decree, as well as all other available and relevant information: (A) determine that Defendant failed to demonstrate that Odessa Kiln 2 could not achieve and maintain a 30-Day Rolling Average Emission Rate of no greater than 2.1 lbs. NO_x/Ton of clinker during the initial 365 Days following the Deadline for Commencement of Continuous Operation of the SNCR and determine 2.1 lbs. NO_x/Ton of clinker to be the NO_x Emission Limit for the Kiln; (B) approve Defendant's proposed Odessa Alternate Limit for NO_x Emissions for Odessa Kiln 2; or (C) establish a different 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 2.

d. Within sixty (60) Days after receiving notice of EPA's determination under Sub-paragraph 21.c, and continuing thereafter, Defendant shall achieve and maintain an Emission Rate of no greater than the NO_x Emission Limit set under Paragraph 21.c, above, and be subject to stipulated penalties for failure to do so pursuant to Section XII (Stipulated Penalties). Defendant may contest EPA's determination pursuant to Section XIV (Dispute Resolution).

Odessa Kiln 1 Compliance Election

22. Defendant shall provide notice to EPA, no later than three years from the Effective Date, of whether it has elected the Odessa Kiln 1 Option A or the Odessa Kiln 1 Option B. A failure to provide notice by the deadline shall be deemed an election of the Odessa Kiln 1 Option B.

a. “Odessa Kiln 1 Option A” means: (i) Odessa Kiln 1 shall be Retired not later than 30 days following the Commencement of Continuous Operation of the SNCR on Odessa Kiln 3; (ii) in no event will Kiln Operation of the Odessa Kiln 1 occur beyond five years after the Effective Date unless SNCR has been installed, Continuously Operated, and optimized following procedures in Appendix C; and, (iii) should operation continue beyond six years from entry, Defendant shall comply with the requirements of Appendix C and, no later than six years from entry, shall have commenced and shall follow a process setting a new final 30-Day Rolling Average Emission Limit for NO_x Emissions pursuant to Paragraphs 24-27.

b. If the Odessa Kiln 1 Option A has been elected, no later than three years and 8 months after the Effective Date, Defendant shall provide documentation to EPA that it has commenced construction of Odessa Kiln 3 through actual expenditures of at least 25 percent of the cost of the principal equipment and has commenced construction on-site of Odessa Kiln 3 (“Odessa Kiln 3 Documentation”). If Defendant fails to provide the Odessa Kiln 3 Documentation, Defendant shall be deemed to have elected the Odessa Kiln 1 Option B and is required to comply with the provisions of Paragraph 22.c; failure to provide such Documentation and notice pursuant to this Paragraph 22.b shall supersede any prior notice under Paragraph 22.

c. “Odessa Kiln 1 Option B” means Odessa Kiln 1 will be Retired no later than three years and 8 months after the Effective Date unless (i) SNCR has been installed, Continuously Operated, and optimized on Odessa Kiln 1 following the procedures in Appendix C to design, install, and optimize the SNCR at Odessa Kiln 1 and (ii) the process setting a new final 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 1 pursuant to Paragraphs 24-27 has commenced and is followed.

23. During the NO_x Demonstration Period or any period before a final 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 1 is determined pursuant to Paragraphs 24-27, Defendant shall comply with the interim 30-Day Rolling Average Emission Limit of no greater than 5.3 lbs. NO_x/Ton of clinker at Odessa Kiln 1, or be subject to stipulated penalties pursuant to Section XII (Stipulated Penalties).

24. Defendant shall follow the procedures in Appendix C to propose a final 30-Day Rolling Average Emission Limit for NO_x from Odessa Kiln 1. The proposed final NO_x Emission Limit shall, at a minimum, reflect the Continuous Operation of the optimized SNCR to control emissions from the Kiln. In no event shall Defendant propose a final NO_x Emission Limit greater than 5.3 lbs. NO_x/Ton of clinker. Upon request by EPA, Defendant shall submit any additional available data that EPA determines it needs to evaluate the demonstration.

25. Defendant shall achieve and maintain a 30-Day Rolling Average Emission Rate of no greater than the proposed 30-Day Rolling Average Emission Limit for NO_x immediately upon submission of the Demonstration Report, and will be liable for stipulated penalties for the failure to do so pursuant to Section XII (Stipulated Penalties).

26. Following receipt of the Demonstration Report for Odessa Kiln 1, EPA may either (A) approve Defendant's proposed 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 1; or (B) establish a different 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 1 as a result of EPA's review of the Demonstration Report and other data submitted or developed pursuant to the Consent Decree, as well as all other available and relevant information.

27. Within sixty (60) Days after receiving notice of EPA's determination under Paragraph 26(B), and continuing thereafter, Defendant shall achieve and maintain an Emission Rate of no greater than the NO_x Emission Limit established in EPA's determination and be liable for stipulated penalties for failure to do so pursuant to Section XII (Stipulated Penalties). Defendant may contest EPA's establishment of a different 30-Day Rolling Average Emission Limit for NO_x Emissions for Odessa Kiln 1 under Paragraph 26(B) pursuant to the requirements of Section XIV (Dispute Resolution).

B. NO_x Continuous Emission Monitoring Systems

28. At each Kiln identified in Paragraph 7.q. of this Decree, except as specified in Paragraph 28.a. below, Defendant shall install and make operational no later than the applicable deadline for Commencement of Continuous Operation of SNCR pursuant to Paragraph 18, a NO_x Continuous Emissions Monitoring System (CEMS) at each stack which collects emissions from such Kiln in accordance with the requirements of 40 C.F.R. Part 60.

a. For Odessa Kiln 1 and Odessa Kiln 2, Defendant shall install and make operational a NO_x CEMS no later than six months following the Effective Date.

29. On or before the date that use of a NO_x CEMS is required pursuant to Paragraph 28, for each Kiln, Defendant shall comply with the requirements of 40 C.F.R. 63.1350(d) to determine hourly clinker production rates at the Facilities.

30. Except during CEMS breakdowns, repairs, periodic accuracy evaluations, calibration checks, and zero span adjustments, the CEMS required pursuant to Paragraph 28 shall be operated at all times during Kiln Operation. Each such CEMS shall be used at each Kiln to demonstrate compliance with the NO_x Emission Limits established in Section VI.A (NO_x Emission Limits and Control Technology) of this Consent Decree.

31. Each NO_x CEMS required pursuant to Paragraph 28 shall monitor and record the applicable NO_x Emission Rate from each Kiln stack in units of lbs. of NO_x per Ton of clinker produced at such Kiln and shall be installed, certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 C.F.R. Part 60.

32. For purposes of this Consent Decree, all emissions of NO_x from Kilns shall be measured by CEMS. During any time when a CEMS is inoperable or otherwise not measuring emissions of NO_x from any Kiln, Defendant shall apply the missing data substitution procedures in 40 C.F.R. Part 75, Subpart D.

VII. SO₂ EMISSION LIMITS AND MONITORING REQUIREMENTS

A. SO₂ Emission Limits

33. Defendant shall demonstrate compliance and thereafter maintain compliance with the 30-Day Rolling Average Emission Limit for SO₂ for each of their specific Kilns in Table 2 on the 30th Operating Day following the date specified in Table 2, below, in this Paragraph 33. In accordance with Paragraph 7.b., Defendant shall calculate a new 30-Day Rolling Average Emission Rate for each new Operating Day and shall maintain a record of each daily calculation of the rate for no less than five years:

TABLE 2:

Kiln	Commencement of 30-Day Rolling Average Emission Limit	30-Day Rolling Average Emission Limit (lbs. SO₂/Ton of clinker)
Knoxville Kiln 1	365 days from Effective Date	0.8
Louisville Kiln 1	730 days from Effective Date	0.6
Demopolis Kiln 1	730 days from Effective Date	1.0
Odessa Kiln 1	180 days from Effective Date	1.5
Odessa Kiln 2	548 days from Effective Date	1.5
Odessa Kiln 3	Within 60 days after achieving the maximum production rate, but no later than 180 Days after initial startup of Kiln 3	0.4
New Braunfels Kiln 1	365 days from Effective Date	0.6
New Braunfels Kiln 2	365 days from Effective Date	0.6

B. SO₂ Continuous Emissions Monitoring System

34. At each Kiln identified in Paragraph 7.q. of this Decree, except as specified in Paragraph 34.a. below, Defendant shall install and make operational no later than the deadline for commencement of each Kiln's 30-Day Rolling Average SO₂ Emission Limit, as set forth in Table 2 of Paragraph 33, a SO₂ CEMS at each stack which collects emissions from such Kiln in accordance with the requirements of 40 C.F.R. Part 60.

a. For Odessa Kiln 1 and Odessa Kiln 2, Defendant shall install and make operational a SO₂ CEMS no later than 180 Days following the Effective Date.

35. Except during CEMS breakdowns, repairs, periodic accuracy evaluations, calibration checks, and zero span adjustments, the CEMS required pursuant to Paragraph 34 shall be operated at all times during Kiln Operation. Each such CEMS shall be used at each Kiln to demonstrate compliance with the SO₂ Emission Limits established in Section VII.A. (SO₂ Emission Limits) of this Consent Decree.

36. Each SO₂ CEMS required pursuant to Paragraph 34 shall monitor and record the applicable SO₂ Emission Rate from each Kiln stack in units of pounds (lbs.) of SO₂ per Ton of clinker produced at such Kiln and shall be installed, certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 C.F.R. Part 60.

37. For purposes of this Consent Decree, all emissions of SO₂ from Kilns shall be measured by CEMS. During any time when a CEMS is inoperable or otherwise not measuring emissions of SO₂ from any Kiln, Defendant shall apply the missing data substitution procedures in 40 C.F.R. Part 75, Subpart D.

VIII. PROHIBITION ON NETTING CREDITS OR OFFSETS FROM REQUIRED CONTROLS

38. NO_x and SO₂ emission reductions resulting from compliance with the requirements of this Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit under the Clean Air Act's Non-attainment NSR and PSD programs.

39. The limitations on the generation and use of netting credits or offsets set forth in Paragraph 38 do not apply to emission reductions achieved by Defendant that are surplus to those required under this Consent Decree ("surplus emission reductions"). For purposes of this Paragraph, surplus emission reductions are the reductions over and above those required under this Consent Decree that result from Defendant's compliance with federally enforceable emissions limits that are more stringent than limits imposed under this Consent Decree or from Defendant's compliance with emissions limits otherwise required under applicable provisions of the Clean Air Act or with an applicable State Implementation Plan (SIP) that contains more stringent limits than those imposed under this Consent Decree.

40. Nothing in this Consent Decree is intended to preclude the emission reductions generated under this Consent Decree from being considered by U.S. EPA or a State Agency Settlor as creditable contemporaneous emission decreases for the purpose of attainment demonstrations submitted pursuant to § 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on National Ambient Air Quality Standards, PSD increments, or air quality-related values, including visibility in a Class I area.

IX. PERMITS

41. Obtaining all permits that are necessary to perform the compliance obligations under the Consent Decree.

a. Where any compliance obligation under this Consent Decree requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit a timely and technically and administratively complete application for such permit or approval, including requests for additional information by the permitting or approval authority. The inability of Defendant to obtain a permit in adequate time to allow for compliance with the deadlines for installation or operation of SNCR or CEMS at each Kiln shall be considered a Force Majeure event if Defendant demonstrates that it exercised best efforts to timely fulfill its permitting obligations and has otherwise complied with the requirements of Section XIII of this Consent Decree (Force Majeure).

b. If, despite complying with the permit application obligations of Paragraph 41.a, Defendant determines that it is unable to timely obtain a permit or approval, then Defendant shall provide Notice to EPA pursuant to Paragraph 70 of this Consent Decree and shall request an extension of time necessary to obtain such permit or approval and to fulfill the delayed Consent Decree obligation. EPA may grant an extension pursuant to Paragraph 71. If Defendant disagrees with EPA's decision, Defendant may invoke dispute resolution procedures pursuant to Paragraph 73.

42. Placing Consent Decree provisions in either a federally-enforceable non-Title V permit or a source-specific State Implementation Plan revision.

a. For each Facility, Defendant must take steps to include the provisions of this Consent Decree listed in Paragraph 42.b., into either: (i) federally-enforceable, non-Title V permit(s) that shall remain effective (and shall be renewed, as necessary) until Retirement of the Facility's Kilns, in accordance with Paragraph 42.c.; or, (ii) a source-specific SIP revision in accordance with Paragraph 42.d. Then, for each Facility, Defendant must obtain a Title V permit (including renewal and/or modified Title V permits) in accordance with Paragraph 43, containing the Consent Decree provisions listed in Paragraph 42.b.

b. The following provisions of this Consent Decree constitute emission limitations and standards and such other conditions as are necessary to assure compliance with applicable requirements of the CAA and must be included in each Facility's Title V permit according to 42 U.S.C. § 7661c(a), shall remain applicable unless superseded by future, federally approved requirements pursuant to the CAA and shall survive Termination (XXII) of this Consent Decree: the 30-Day Rolling Average Emission Limit for NO_x for each Kiln (either from Table 1 (Paragraph 18) or, for Odessa Kiln 2 if established pursuant to Paragraph 21 or, for Odessa Kiln 1, if established pursuant to the Process set forth in Paragraphs 24-27; the requirement to demonstrate compliance for each Kiln by calculating a new 30-Day Rolling Average Emission Rate for NO_x for each new Operating Day (Paragraph 19); the requirement for Continuous Operation of SNCR on each Kiln (Paragraph 20); the requirements for NO_x CEMS monitoring (Paragraphs 28-32); the 30-Day Rolling Average Emission Limit for SO₂ for each Kiln from Table 2 (Paragraph 33); the requirement to demonstrate compliance for each Kiln by calculating a new 30-Day Rolling Average Emission Rate for SO₂ for each new Operating Day (Paragraph 33); the requirements for SO₂ CEMS monitoring (Paragraphs 34 through 37); and the definitions contained in Paragraphs 7.a, 7.b, 7.c, 7.d, 7.e, 7.h, 7.k, 7.n, 7.o, 7.q (as applicable), 7.r, 7.s, 7.y, 7.z, 7.hh, 7.ii, 7.kk, 7.nn.

c. In addition to having first obtained any required preconstruction permits or other approvals pursuant to Paragraph 41, within 12 months after a 30-Day Rolling Average Emission Limit becomes applicable pursuant to Section VI.A. (Paragraphs 18-27) of this Consent Decree, Defendant shall apply to the appropriate permitting authority to include the generally applicable, and any Facility-specific, Consent Decree provisions listed in Paragraph 42.b, into a permit or approval (other than a Title V permit) which is in effect (and shall be renewed, as necessary) until Retirement of the Facility's Kilns, federally enforceable, issued under the SIP of the applicable state, and issued under authority independent of the appropriate permitting authority's authority to issue Title V permits. Any such permit or approval shall expressly incorporate the generally applicable, and any Facility-specific, Consent Decree provisions listed in Paragraph 42.b. Following its submission of the application for the required permit or approval under this Paragraph, Defendant shall cooperate with the appropriate permitting authority by promptly (considering the burden of submission) submitting all information that such permitting authority seeks following its receipt of the application for the permit. The methods specified in this Decree for demonstrating compliance with the Emission Limits in this Decree are not intended to change the means by which a Defendant demonstrates compliance with standards not addressed by this Decree and do not need to be specifically incorporated within any other required permit or approval. The requirements of this Paragraph 42.c. are met if the preconstruction permit or other approval issued pursuant to Paragraph 41: (a) is in effect (and shall be renewed, as necessary) until Retirement of the Facility's Kilns; (b) incorporates the Consent Decree provisions listed in Paragraph 42.b.; (c) is federally-enforceable; and (d) is issued under the applicable SIP.

d. In lieu of incorporating the Consent Decree provisions listed in Paragraph 42.b. directly into a permit issued under a SIP pursuant to Paragraph 42.c., where a Facility is located in a state that does not issue non-Title V federally enforceable permits of the type described in Paragraph 42.c, Defendant must request that the state submit the portions of the Consent Decree specified in Paragraph 42.b., and applicable to the Facility, to the U.S. EPA for approval under the State's SIP in accordance with 42 U.S.C. § 7410, including but not limited to 42 U.S.C. § 7410(k). Upon approval by the U.S. EPA, those portions of this Consent Decree will be incorporated into the relevant state's SIP, and subsequently incorporated into Title V permits for each Facility, as set forth in Paragraph 43. Defendant agrees not to contest the submittal of any such proposed SIP revision to the extent that it incorporates provisions of this Consent Decree to U.S. EPA, or U.S. EPA's approval of such submittal, or the incorporation of the applicable provisions of this Consent Decree through these SIP requirements into the Title V permits.

43. Placing requirements of the Consent Decree into Title V permits. Upon issuance of any permit or approval or source-specific SIP revision under Paragraph 42, Defendant shall file any applications necessary to incorporate the requirements of that permit or approval or source-specific SIP revision into the Title V operating permit of the appropriate Facility. Such applications for a Title V permit or for any subsequent renewal or modifications thereof, shall: (i) expressly incorporate the Consent Decree provisions listed in Paragraph 42.b., (ii) specify that such provisions constitute "emission limitations and standards and other conditions which are

necessary to assure compliance with applicable requirements of the CAA within the meaning of 42 U.S.C. § 7661c(a),” and (iii) specify that such provisions shall remain applicable unless superseded by future, federally approved requirements pursuant to the CAA and shall not be revised without the express written approval of the U.S. EPA and the applicable State Agency Settlor. Defendant shall not challenge the inclusion of the provisions listed in Paragraph 42.b. in any Title V permit unless such provisions are superseded by future, federally approved requirements pursuant to the CAA, but nothing in this Consent Decree is intended nor shall it be construed to require the establishment of Emission Limits requirements or limitations other than those expressly prescribed in this Consent Decree nor to preclude Defendant from challenging any more stringent Emission Limits should they be proposed for reasons independent of this Consent Decree.

44. For each Kiln, Defendant shall provide U.S. EPA, in accordance with Section XVIII (Notices), with a copy of each application for a permit, permit modification, or approval to address or comply with any provision of this Consent Decree, as well as a copy of any permit or approval proposed as a result of such application, to allow for timely U.S. EPA participation.

45. Notwithstanding the reference to Title V permits in this Consent Decree, the enforcement of such permits shall be in accordance with their own terms and the Act. The Title V permits shall not be enforceable under this Consent Decree, although any term or limit established by or under this Consent Decree shall be enforceable under this Consent Decree regardless of whether such term has or will become part of a Title V permit, subject to the terms of Section XXII (Termination) of this Consent Decree.

46. This Consent Decree shall not terminate (Section XXII) with respect to a Facility until that Facility obtains both (i) non-Title V federally-enforceable permits or SIP amendments (compliant with Paragraph 42.c. or 42.d.) and (ii) Title V permits (compliant with Paragraph 43) for such Facility.

X. REVIEW AND APPROVAL OF CERTAIN DELIVERABLES

47. After review of any plan, report or other item that is required to be submitted pursuant to Appendix A, Paragraph 1, Appendix C, Paragraph 2.a., or Appendix C, Paragraph 5.a. of this Consent Decree, EPA, after consultation with the applicable State Agency Settlor, shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder (with an explanation of the reasons for disapproval); or (d) disapprove the submission (with an explanation of the reasons for disapproval). Reasons for disapproval shall be based on Section V and Paragraph 24 of this Consent Decree and on the requirements of Appendix A or C, as applicable.

48. If the submission is approved pursuant to Paragraph 47, Defendant shall take all actions required by the plan, report, or other item, in accordance with the schedules and requirements of the plan, report, or other item, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 47(b) or (c), Defendant shall, upon written direction from EPA after consultation with the applicable State Agency Settlor, take all actions required by the approved plan, report, or other item that EPA, after consultation with the applicable State Agency Settlor, determines are technically severable from any disapproved

portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XIV (Dispute Resolution).

49. If the submission is disapproved in whole or in part pursuant to Paragraph 47(c) or (d), Defendant shall, within forty-five (45) days or such other time as the Parties agree to in writing, revise and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

50. Any stipulated penalties applicable to the original submission, as provided in Section XII, shall accrue during the forty-five (45) day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of that Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

51. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA after consultation with the applicable State Agency Settlor, may again require the Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, or may themselves correct any deficiencies, in either case subject to Defendant's right to invoke Dispute Resolution and the right of EPA and applicable State Agency Settlor to seek stipulated penalties as provided in the preceding Paragraphs and under the procedures in Section XII below.

XI. REPORTING REQUIREMENTS

52. Defendant shall submit the following reports: By July 31st and January 31st of each year after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XXII, Defendant shall submit by electronic mail and U.S. Mail a semi-annual report to U.S. EPA and the applicable State Agency Settlers for the preceding six months ending on June 30 and December 31, respectively. The first such report, however, will cover the period between the Effective Date and 30 Days prior to the due date (July 31st or January 31st). These semi-annual reports shall be complete and accurate in providing the following information:

a. Identify any and all dates on which Defendant has installed, or describe the progress of, as applicable, installation, modification, optimization or operational changes to SNCR for each Kiln under Section VI.A. (NO_x Emission Limits and Control Technology), and describe any problems encountered or anticipated, together with implemented or proposed solutions;

b. Identify any and all dates on which Defendant has completed installation of, or describe the progress of installation or modification of, each CEMS required under Section VI.B (NO_x Continuous Emission Monitoring Systems) and Section VII.B. (SO₂ Continuous Emission Monitoring Systems), and describe any problems encountered or anticipated, together with implemented or proposed solutions;

c. Provide, in electronic format able to be manipulated with Microsoft Excel, all CEMS data collected for each Kiln, reduced to 1 hour averages, in accordance with

40 C.F.R. Part 60.13(h)(2), including an explanation of any periods of CEMS downtime together with any missing data for which Defendant applied missing data substitution procedures, under Section VI.B (NO_x Continuous Emission Monitoring Systems) and Section VII.B (SO₂ Continuous Emission Monitoring Systems);

d. Demonstrate compliance with all applicable 30-Day Rolling Average Emission Limits of this Consent Decree;

e. Describe the progress of Defendant in implementing the Environmental Mitigation Project required by Section V, including a summary of actions and expenditures (cumulative and in current reporting period) made pursuant to Section V to implement the Environmental Mitigation Project;

f. Describe the status of permit applications and any proposed SIP revisions made to implement the requirements of this Consent Decree, including a table that identifies each CD limit applicable to each Kiln, the date the permit application was submitted to incorporate that limit, and the date a permit that included the limit was issued;

g. Describe the status of any operation and maintenance work relating to activities required under this Consent Decree; and,

h. Describe any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation.

53. If Defendant violates, or has reason to believe that it may have violated, any requirement of this Consent Decree, Defendant shall notify the United States and the applicable State Agency Settlor of such violation and its likely duration, in writing, within ten (10) Business Days of the Day Defendant first becomes aware of the violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section XIII (Force Majeure).

54. Whenever any violation of this Consent Decree, or of any applicable permits required under this Consent Decree, or any other event affecting Defendant's performance under this Decree, or the performance of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the applicable State Agency Settlor orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

55. All reports shall be submitted to the persons designated in Section XVIII (Notices).

56. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

57. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

58. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

59. Any information provided pursuant to this Consent Decree may be used by the United States or any State Agency Settlor in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

XII. STIPULATED PENALTIES

60. The applicable Defendant shall be liable for stipulated penalties for violations of this Consent Decree as specified below, unless excused under Section XIII (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree. Violation of an Emission Limit that is based on a 30-Day Rolling Average Emission Rate is a violation on every Day on which the average is based. Each subsequent Day of violation after a violation of a 30-Day Rolling Average Emission Limit is subject to the corresponding penalty per Day specified in Table 3, below. Where a violation of a 30-Day Rolling Average Emission Limit (for the same pollutant and from the same source) recurs within periods of less than thirty (30) Days, Defendant shall not pay a daily stipulated penalty for any Day of recurrence for which a stipulated penalty is already payable. Stipulated penalties may only be assessed once for a given Day or month within any averaging period for violation of any particular Emission Limit.

Table 3

Consent Decree Violation	Stipulated Penalty
a. Failure to pay the civil penalty as specified in Section IV (Civil Penalty) of this Consent Decree.	\$7,500 for each Day.

<p>b. Failure to comply with a 30-Day Rolling Average Emission Limit for NO_x or SO₂ where the emissions are less than 5% in excess of the limits set forth in this Consent Decree.</p>	<p>\$1,000 for each Operating Day during any 30-Day rolling period where the violation is less than 5% in excess of the Limit. Provided, however, that stipulated penalties shall not be assessed for any excess emissions to the extent that they are caused by a Malfunction that qualifies as a Force Majeure event under Section XIII and the Defendant has complied with the requirements of that Section. This provision applies only to the calculation of stipulated penalties, and shall not be included in any permit.</p>
<p>c. Failure to comply with a 30-Day Rolling Average Emission Limit for NO_x or SO₂ where the emissions are equal to or greater than 5% but less than 10% in excess of the limits set forth in this Consent Decree.</p>	<p>\$2,000 for each Operating Day during any 30-Day rolling period where the violation is equal to or greater than 5% but less than 10% in excess of the Limit. Provided, however, that stipulated penalties shall not be assessed for any excess emissions to the extent that they are caused by a Malfunction that qualifies as a Force Majeure event under Section XIII and the Defendant has complied with the requirements of that Section. This provision applies only to the calculation of stipulated penalties, and shall not be included in any permit.</p>
<p>d. Failure to comply with a 30-Day Rolling Average Emission Limit for NO_x or SO₂ where the emissions are equal to or greater than 10% in excess of the limits set forth in this Consent Decree.</p>	<p>\$3,000 for each Day during any 30-Day rolling period where the violation is equal to or greater than 10% in excess of the Limit. Provided, however, that stipulated penalties shall not be assessed for any excess emissions to the extent that they are caused by a Malfunction that qualifies as a Force Majeure event under Section XIII and the Defendant has complied with the requirements of that Section. This provision applies only to the calculation of stipulated penalties, and shall not be included in any permit.</p>
<p>e. Failure to Retire Odessa Kiln 1 as required by Paragraph 22.a of this Consent Decree, if applicable.</p>	<p>\$25,000 for each Day Kiln 1 Operates past any applicable deadline.</p>

f. Failure to provide Odessa Kiln 3 Documentation in compliance with Paragraph 22.b and Kiln Operation of Odessa Kiln 1 without complying with Paragraph 22.c.	\$25,000 for each Day Odessa Kiln 1 Operates past this deadline.
g. Failure to Commence Continuous Operation of SNCR at a Kiln required by the deadlines established in Section VI of this Consent Decree.	\$5,000 for each consecutive Operating Day for the first 20 Days, \$10,000 for each consecutive Operating Day for the next 40 Days, and \$37,500 for each consecutive Operating Day thereafter.
h. Failure to Continuously Operate SNCR at a Kiln after the deadline for such operation in Section VI of this Consent Decree, excluding downtime of up to four consecutive hours necessary for maintenance or due to malfunction so long as it does not cause the Kiln to exceed its 30-Day Rolling Average Emission Limit for NO _x and so long as downtime does not exceed 90 hours in that calendar year.	For each calendar year, \$5,000 for each Operating Day for the first 20 Days, \$10,000 for each Operating Day for the next 40 Days, and \$37,500 for each Operating Day thereafter.
i. Failure to apply for any permit or permit amendment required by Section IX (Permits), or if required by Section IX, failure to seek a source-specific SIP revision.	\$1,000 for each Day for each such failure.
j. Failure to install or operate a CEMS or other monitoring device in conformance with the requirements of Section VI.B. (NO _x Continuous Emission Monitoring Systems) or Section VII.B (SO ₂ Continuous Emission Monitoring Systems).	\$1,000 for each Operating Day for each such failure.
k. Failure to timely submit, modify, or implement, as approved, a report, plan, study, analysis, protocol, or other submittal required by this Consent Decree	\$750 for each Day during the first 10 Days, \$1,000 per Day thereafter.
l. Any violation of this Consent Decree not covered elsewhere in this Table 3.	\$1,000 for each Day for each violation.

61. Subject to the provisions of Paragraph 60 above, stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of the provisions of this Consent Decree, but each separate violation shall be subject to no more than one stipulated penalty.

62. Subject to Paragraph 64 below, the applicable Defendant shall pay stipulated penalties to the United States and any applicable State Agency Settlor within thirty (30) Days of receipt of a written demand. A copy of a demand by the United States or a State Agency Settlor shall be simultaneously sent to the other party, and where multiple demands for the same violation are served on Defendant any such demands shall be consolidated into a single demand to facilitate informal negotiation, any Dispute Resolution, and any payments. Defendant shall pay 50 percent of the total stipulated penalty amount due to the United States and 50 percent to the applicable State Agency Settlor identified by the United States.

63. Either the United States or the applicable State Agency Settlor may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

64. Stipulated penalties shall continue to accrue as provided in Paragraph 61, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA or, in the case of a claim for stipulated penalties brought solely by a State Agency Settlor, a decision of that State Agency Settlor, that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest in accordance with Paragraphs 61 and 67 to the United States or the applicable State Agency Plaintiff within 30 Days of the effective date of the agreement or the receipt of EPA's or a State Agency Settlor's decision or order.

b. If the dispute is appealed to the Court and the United States or State Agency Settlor prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest in accordance with Paragraphs 61 and 67, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c., below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, if any, together with interest in accordance with Paragraphs 61 and 67, within 15 Days of receiving the final appellate court decision.

65. The owning or operating Defendant shall pay any stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 9, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Defendant shall pay any stipulated penalties owing to Knox County, in the manner set forth in Paragraph 10, or to Louisville Metro Air Pollution Control District, payable by check, and delivered by mail to Keith H. Talley, Sr., Executive Director, 701 W. Ormsby Avenue, Suite 303, Louisville, KY 40203, as applicable.

66. Defendant shall not deduct stipulated penalties paid under this Section in calculating its federal, state or local income tax.

67. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the applicable State Agency Settlor from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

68. Subject to the provisions of Section XVI (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States (including, but not limited to, statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt) for Defendant's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of any applicable statute or regulation, Defendant shall be allowed a dollar-for-dollar credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

XIII. FORCE MAJEURE

69. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of a Defendant, of any entity controlled by Defendant, or of Defendant's Contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercises "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

70. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice orally or by electronic or facsimile transmission to the representatives of U.S. EPA and the applicable State Agency Settlor designated to receive notice pursuant to Section XVIII (Notices), within five (5) Business Days of when Defendant first knew that the event might cause a delay of such performance. Within ten (10) Business Days thereafter, Defendant shall provide in writing to EPA and the applicable State Agency Settlor: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendants shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's

Contractors whose duties include performance of work required to comply with any provision of this Consent Decree, knew or reasonably should have known.

71. If EPA, after a reasonable opportunity for review and comment by the applicable State Agency Settlor, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, after a reasonable opportunity for review and comment by the State Agency Settlor, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

72. If EPA, after a reasonable opportunity for review and comment by the applicable State Agency Settlor, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

73. If Defendant elects to invoke the dispute resolution procedures set forth in Section XIV (Dispute Resolution), it shall do so no later than thirty (30) days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 69 and 70. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XIV. DISPUTE RESOLUTION

74. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree (including a dispute arising from withholding of consent to a transfer pursuant to Paragraph 4, above). The failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States, or an applicable State Agency Settlor, to enforce any obligation of the applicable Defendant arising under this Decree. With respect to disputes over potential Stipulated Penalties under this Consent Decree, the United States, in its sole discretion, may withdraw from the dispute resolution process at any time, and allow the State Agency Settlor to take the place of the United States in the dispute resolution process, by giving written notice to the other parties; in such case, the term United States in this Dispute Resolution section shall mean the United States or the State Agency Settlor, as applicable. In the event of such a withdrawal, all decisions by the applicable State Agency Settlor regarding stipulated penalties for that specific dispute shall be the final and only resolution of that dispute.

75. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when a Defendant sends the United States, and the relevant State Agency Settlor, if any, a written Notice of Dispute. Such Notice of Dispute shall state clearly the

matter in dispute. The period of informal negotiations shall not exceed twenty (20) Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 30 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

76. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the applicable State Agency Settlor a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

77. The United States, after consultation with the applicable State Agency Settlor, shall serve its Statement of Position within forty-five (45) Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

78. A Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, and any applicable State Agency Settlor, in accordance with Section XVIII (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within thirty (30) Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

79. The United States, after consultation with the applicable State Agency Settlor, shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

80. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 76 (Formal Dispute Resolution), Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and that it is entitled to relief under applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless arbitrary and capricious or otherwise not in accordance with law, and Defendant reserves the right to oppose this position.

81. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of a Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 64. As part of the resolution of any dispute under this Section that relates to scheduling of or deadlines for work required under this Consent Decree, in appropriate circumstances the disputing Parties may

agree, or this Court may order, an extension or modification of the schedule or deadline for the completion of the work required under this Consent Decree.

XV. INFORMATION COLLECTION AND RETENTION

82. The United States, the State Agency Settlers, and their representatives, including attorneys, Contractors, and consultants, shall have the right of entry into any Facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State Agency Settlers in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by a Defendant or its representatives, Contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data;
and,
- e. assess a Defendant's compliance with this Consent Decree.

83. Upon request, a Defendant shall provide U.S. EPA and the applicable State Agency Settlor, and their authorized representatives, copies of analytical data from Kiln performance testing performed by Defendant. Upon request, U.S. EPA and the applicable State Agency Settlor shall provide Defendant copies of analytical data from Kiln performance testing performed by U.S. EPA or the State Agency Settlor.

84. Until five (5) years after the Termination of this Consent Decree, pursuant to either Paragraph 105 or 106, the applicable Defendant shall retain, and shall instruct its Contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its Contractors' or agents' possession or control, and that relate to that Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State Agency Settlor, the applicable Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

85. At the conclusion of the information-retention period provided in the preceding Paragraph, each applicable Defendant shall notify in writing the United States and the State Agency Settlers at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State Agency Settlers, the applicable Defendant shall deliver any such documents, records, or other information to EPA or the State Agency Settlers. Defendant may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If a Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a

description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

86. Defendant may also assert that information required to be provided under this Section, except for information and data necessary to determine compliance with any NO_x or SO₂ emission limits contained in this Consent Decree, is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

87. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State Agency Settlers pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XVI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

88. With respect to the emissions of NO_x, and SO₂ from the Kilns identified in Paragraph 7.q., upon entry of this Consent Decree U.S. EPA and the State Agency Settlers release and covenant not to sue or take administrative action against Defendants for any violations of the following requirements resulting from or arising out of a construction, reconstruction or modification that commenced prior to the Date of Lodging of the Consent Decree:

a. The PSD requirements at Part C of Subchapter I of the Act, 42 U.S.C. §§7470-92, and the regulations promulgated thereunder, including those at 40 C.F.R. §§ 52.21, 52.24, and Part 51 Subpart I; “Plan Requirements for Non-attainment Areas” at Part D of Subchapter I of the Act, 42 U.S.C. § 7501-11f; 7513-15; and the regulations promulgated thereunder, including those at 40 C.F.R. Part 51 Subpart I, 40 C.F.R. Part 51 (Appendix S), and 40 C.F.R. Part 52 Subpart A; any applicable federally-enforceable State, regional, or local regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified above; and, any applicable State, regional, or local regulations that implement, adopt, or incorporate the specific federal regulatory requirements identified above.

b. Title V of the Clean Air Act, 42 U.S.C. §§ 7661-7661f, and the regulations promulgated thereunder, including any applicable federally-enforceable State, regional, or local regulations that implement, adopt, or incorporate the specific federal regulatory requirements of Title V; and, any applicable State, regional, or local regulations that implement, adopt, or incorporate the specific federal regulatory requirements of Title V, but only to the extent that such claims are based on the Defendant’s failure to obtain an operating permit that reflects requirements imposed under Parts C or D of Subchapter I of the Clean Air Act as a result of construction or modification of the Kilns identified in Paragraph 7.q.

89. Notwithstanding the resolution of liability in the preceding Paragraph 88, nothing in this Consent Decree precludes the United States or State Agency Settlers from seeking from

Defendant injunctive relief, penalties, or other appropriate relief for violations by Defendant of the regulatory requirements identified in Paragraph 88 resulting from (1) construction or modification that commenced prior to the Effective Date of the Consent Decree, if the resulting violations do not relate to the Kilns or do not relate to NO_x or SO₂; or (2) any construction, reconstruction or modification that commences after the Date of Lodging of the Consent Decree.

90. Nothing in this Consent Decree is intended to limit or disqualify Defendant, on the grounds that information was not discovered and supplied voluntarily, from seeking to apply EPA's Audit Policy or any state or local audit policy to any violations or non-compliance that Defendant discovers during the course of any investigation, audit, or enhanced monitoring that Defendant is not required to undertake pursuant to this Consent Decree.

91. The United States and State Agency Settlers reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 88. This Consent Decree shall not be construed to limit the rights of the United States or State Agency Settlers to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 88. The United States and State Agency Settlers further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, a Defendant's Facility, whether related to the violations addressed in this Consent Decree or otherwise; provided that such an action may not be based on claims that have been specifically resolved pursuant to Paragraph 88.

92. In any subsequent administrative or judicial proceeding initiated by the United States or State Agency Settlers for injunctive relief, civil penalties, other appropriate relief relating to a Kiln or a Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or State Agency Settlers in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 88.

93. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State Agency Settlers do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, 42 U.S.C. § 7401 *et seq.*, or with any other provisions of federal, State, or local laws, regulations, or permits.

94. This Consent Decree does not limit or affect the rights of Defendant or of the United States or State Agency Settlers against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

95. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XVII. COSTS

96. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State Agency Settlers shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XVIII. NOTICES

97. Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

As to the United States by email:

eescdcopy.enrd@usdoj.gov
Re: DJ # 90-5-2-1-09716

As to the United States by mail:

EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-5-2-1-09716

As to US EPA by mail:

Director, Air Enforcement Division
U.S. Environmental Protection Agency
MC 2242A
1200 Pennsylvania Ave. NW
Washington DC 20460
Attn: Shaun Burke
Senior Environmental Engineer
Air Enforcement Division, OCE, EPA
202-564-1039

And

For all submissions referring to the Knoxville, Demopolis and Louisville Facilities:

Director, Air, Pesticides and Toxics Management
Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

Valerie Nowell
Senior Attorney for Air Enforcement
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

For all submissions referring to the Odessa and New Braunfels Facilities:

Hard copies -
Chief, Air Enforcement Branch
Mail Code 6EN-A
USEPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Electronic copies -
CAA Consent Decree Coordinator
Air Enforcement Branch
Mail Code 6EN-AA
USEPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
R6CAACDDeliverables@epa.gov

As to State Agency Plaintiffs:

For all submissions referring to the Knoxville Facility, to Knox County:

Daniel A. Sanders
Deputy Law Director
Counsel for Knox County
400 Main Street, Suite 612
Knoxville, TN 37902
(865) 215-2327

For all submissions referring to the Louisville Facility, to Jefferson County:

Keith H. Talley, Sr.
Executive Director
701 W. Ormsby Avenue, Suite 303
Louisville, KY 40203
(502) 574-6000

As to Defendants:

General Counsel
CEMEX, Inc.
929 Gessner Road
Suite 1900
Houston, TX 77024

With copies to:

CEMEX, Inc.
Attention: Legal Department
1501 Belvedere Road
West Palm Beach, Florida 33406

98. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above. By written notice to the other Parties, EPA also may request that submissions to it be made only electronically.

99. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

100. Upon future written agreement of the sending and receiving Parties, notifications, communications, or submissions required under this Consent Decree may be submitted electronically in lieu of by mail or commercial delivery service. The Parties will determine the procedures for electronic submittal at that time.

XIX. EFFECTIVE DATE

101. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XX. RETENTION OF JURISDICTION

102. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XIV and XXI, or effectuating or enforcing compliance with the terms of this Decree.

XXI. MODIFICATION

103. The terms of this Consent Decree, including any attached Appendix, may be modified only by a subsequent written agreement signed by the Defendant, the United States, and all appropriate State Agency Settlers. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

104. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XIV (Dispute Resolution), provided, however, that instead of the burden of proof provided by Paragraph 80, the Party seeking the modification bears the burden of demonstrating

that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XXII. TERMINATION

105. Termination as to an individual Facility. After Defendant has satisfied the Decree requirements of Sections IV (Civil Penalty) and V (Environmental Mitigation), and the applicable Defendant has, with respect to a Facility, maintained satisfactory compliance with the requirements of this Consent Decree, including but not limited to the requirements of Sections VI (NO_x Control Technology, NO_x Emission Limits, and Monitoring Requirements), VII (SO₂ Emission Limits and Monitoring Requirements) and IX (Permits), has maintained operation of all control technology for that Facility required by this Consent Decree for a period of two years, and has paid any accrued stipulated penalties concerning that Facility as required by this Consent Decree, the applicable Defendant may serve upon the United States and the applicable State Agency Settlor (if any) a Request for Termination of this Decree with respect to that Facility stating that the foregoing requirements have been satisfied, together with all necessary supporting documentation. If the United States and the applicable State Agency Settlor agree that the Consent Decree as it relates to the individual Facility may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating those provisions of the Consent Decree.

106. Complete Termination. After Defendant has satisfied the Decree requirements of Sections IV (Civil Penalty) and V (Environmental Mitigation), has maintained satisfactory compliance with the requirements of this Consent Decree, including but not limited to Sections VI (NO_x Control Technology, Emission Limits, and Monitoring Requirements), VII (SO₂ Emission Limits and Monitoring Requirements) and IX (Permits), has maintained operation of all Control Technology required by this Consent Decree for a period of two years, and has paid any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the State Agency Settlers a Request for Termination of this Consent Decree stating that the foregoing requirements have been satisfied, together with all necessary supporting documentation. If the United States and the State Agency Settlers agree that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

107. Any Request to Terminate pursuant to Paragraph 105 or 106 shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

108. Defendant may invoke Dispute Resolution under Section XIV if: 1) in the case of an individual Facility Termination request pursuant to Paragraph 105, the United States or the applicable State Agency Settlor, does not agree that the Consent Decree may be terminated as to that Facility or; 2) in the case of Complete Termination pursuant to Paragraph 106, the United States or a State Agency Settlor does not agree that the Consent Decree may be terminated in whole. However, Defendant shall not seek Dispute Resolution of any dispute regarding Termination until sixty (60) Days after service of its Request for Termination.

XXIII. PUBLIC PARTICIPATION

109. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant and the State Agency Settlers consent to entry of this Consent Decree without further notice and agree not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified the other Parties in writing that it no longer supports entry of the Decree.

XXIV. SIGNATORIES/SERVICE

110. Each undersigned representative of Defendant, the State Agency Settlers, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document. In addition, the State Agency Settlers agree to submit to the jurisdiction of this Court, including but not limited to its orders during dispute resolution, and they agree to be bound by the terms and conditions of this Consent Decree.

111. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. The parties agree that Defendant need not file an answer to the Complaint in this matter unless or until the Court expressly declines to enter this Consent Decree.

XXV. INTEGRATION

112. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXVI. HEADINGS

113. Headings to the sections and subsections of this Consent Decree are provided for convenience and do not affect the meaning or interpretation of the provisions of this Consent Decree.

XXVII. FINAL JUDGMENT

114. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the Parties.

Dated and entered this 29 day of November, 2016


/s/ Harry S. Mattice, Jr.
UNITED STATES DISTRICT JUDGE

Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*


FOR THE UNITED STATES OF AMERICA:

7/25/2016

Date



JOHN C. CRUDEN
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice



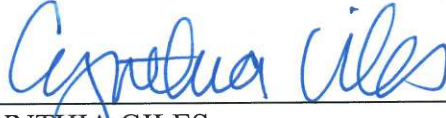
ANDREW W. INGERSOLL
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Washington, DC 20044-7611

Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*

FOR THE U.S. ENVIRONMENTAL PROTECTION
AGENCY:

7/16/16

Date



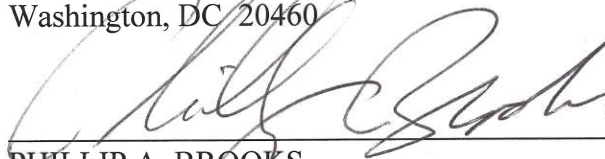
CYNTHIA GILES

Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460



SUSAN SHINKMAN

Director, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460



PHILLIP A. BROOKS

Director, Air Enforcement Division, Office of Civil
Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460




ROBERT G. KLEPP

Attorney Advisor
Air Enforcement Division, Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*


FOR THE U.S. ENVIRONMENTAL PROTECTION
AGENCY:

7.11.16
Date



JOHN BLEVINS
Director
Compliance Assurance and Enforcement Division
EPA Region 6
Dallas, TX

7/11/16
Date



JUSTIN LANNEN
Assistant Regional Counsel for Air Enforcement
United States Environmental Protection Agency
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1445 Ross Ave, Ste 1200
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Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*

FOR THE U.S. ENVIRONMENTAL PROTECTION
AGENCY:

7/20/14
Date


HEATHER MCTEER TONEY

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FOR KNOX COUNTY, TENNESSEE, ex rel, LYNNE
LIDDINGTON, DIRECTOR OF AIR QUALITY
MANAGEMENT FOR KNOX COUNTY, TENNESSEE:

7/22/16
Date


LYNNE LIDDINGTON
Director of Air Quality Management for Knox County,
Tennessee

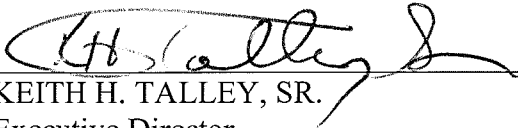
7-22-16
Date



DANIEL A. SANDERS
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FOR THE LOUISVILLE METRO AIR POLLUTION
CONTROL DISTRICT:

6/30/16
Date



KEITH H. TALLEY, SR.
Executive Director
Louisville Metro Air Pollution Control District


STACY FRITZE DOTT
Assistant Jefferson County Attorney
Office of Jefferson County Attorney Michael J. O'Connell

Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*

7/8/16
Date

FOR CEMEX, INC.



Hugo Bolio

Vice President

FOR CEMEX CONSTRUCTION MATERIALS
ATLANTIC, LLC:

7/8/16
Date



Hugo Bolio

Vice President

FOR CEMEX CONSTRUCTION MATERIALS SOUTH,
LLC:

7/8/16
Date




Hugo Bolio

Vice President

FOR CEMEX SOUTHEAST, LLC:

7/8/16
Date



Hugo Bolio

Vice President

FOR KOSMOS CEMENT COMPANY:

Date

Signature Page to the Consent Decree in *United States et al. v. Cemex Inc. et al.*

FOR CEMEX, INC.,

Date

FOR CEMEX CONSTRUCTION MATERIALS
ATLANTIC, LLC:

Date

FOR CEMEX CONSTRUCTION MATERIALS SOUTH,
LLC:


Date

FOR CEMEX SOUTHEAST, LLC:

Date

FOR KOSMOS CEMENT COMPANY:

June 28, 2016
Date



DAVID H. BURRIS
KOSMOS CEMENT

CONSENT DECREE APPENDIX A
United States et al. v. CEMEX, Inc. et al.
Environmental Mitigation Project

In compliance with and in addition to the requirements of Section V of this Consent Decree (Environmental Mitigation Project), Defendant shall comply with the requirements of this Appendix A to ensure that the benefits of the Environmental Mitigation Project below are achieved.

Energy Audits

1. By no later than 12 months following the Effective Date, Defendant shall submit, for approval, a proposal to conduct energy audits of all Facilities. The proposal shall be deemed acceptable to EPA if EPA does not respond within 30 days of receipt of the proposal.
2. The audit proposal shall contain a description of the audits (including of the physical areas and processes to be audited) that Defendant will undertake, identify the Contractor to be used to conduct the audits, the certifications of the Contractor, and a proposed schedule for the audits.
3. Audits shall, at a minimum, include both a preliminary (walkthrough) audit as well as a detailed diagnostic audit of all stationary (e.g., clinker crusher, buildings) and mobile (e.g., quarry loader, diesel locomotive) components of a Facility that have direct or indirect potential to emit NO_x.
4. By no later than 36 months following the Effective Date, Defendant shall complete the energy efficiency audits of all Facilities. The energy efficiency audits shall identify actions that, if implemented, would directly or indirectly reduce NO_x emissions ("Energy Audit"). Defendant shall share the results of the Energy Audits with the United States and the State Agency Settlers.

Energy Efficiency Actions

5. By no later than 48 months following the Effective Date, Defendant shall spend a total of \$150,000, exclusive of Defendant's own oversight costs, on energy efficiency projects ("Energy Efficiency Actions") with direct or indirect reductions of NO_x emissions.
6. Defendant shall make good faith efforts to undertake all Energy Efficiency Actions identified by the audits at the Demopolis Facility as a first priority and, as a second priority, at the Knoxville Facility.
7. All Energy Efficiency Actions must have quantifiable direct or indirect NO_x emissions reductions.

CONSENT DECREE APPENDIX B

United States et al. v. CEMEX, Inc. et al.

Petition for Relief from the NO_x Emission Limit for Odessa Kiln 2

This Appendix identifies the procedures and details of a potential Petition for Relief from the 30-Day Rolling Average Emission Limit for NO_x emissions (identified in Paragraph 18 of the Consent Decree) for Odessa Kiln 2.

If Defendant chooses to submit a Petition for Relief (“Petition”) under Paragraph 21 of the Consent Decree, the Petition must be submitted by the deadline identified in Paragraph 21 and must contain:

- a. A description of the operation of the SNCR on Kiln 2, a detailed analysis of the reason(s) that Defendant has identified that Kiln 2 is unable to continuously meet the 30-Day Rolling Average Emission Limit for NO_x emissions in Paragraph 18 of the Consent Decree.
- b. A description of all steps taken to adjust the system during the preceding 365 Days to meet the limit in Paragraph 18.
- c. The following data collected while the SNCR was operating during the period between the start of Continuous Operation of the SNCR and the submittal of this Petition. When submitted, Defendant shall provide the data to EPA in an electronic format consistent with and able to be manipulated by Microsoft Excel and explain the reasons for all data not collected:
 - i. Kiln flue gas temperature at the inlet to the fabric filter or at the Kiln stack (daily average);
 - ii. Kiln production in tons of clinker (daily total) and the method used to calculate Kiln production;
 - iii. Raw material feed in tons (daily total);
 - iv. Type and percentage of each raw material used (daily);
 - v. Daily average NO_x, SO₂, Ammonia, and CO concentrations (ppm - dry basis) and mass rates;
 - vi. Flue gas volumetric flow rate (daily average in dry acfm);
 - vii. Feed burnability (C3S) (at least daily);
 - viii. Temperatures in or near the burning zone (daily average);
 - ix. Kiln system fuel feed rate and type of fuel by weight or heat input rate (calculated to a daily average);
 - x. Kiln amps (daily average);
 - xi. Kiln back end O₂ concentration (daily average);

- xii. Kiln system draft fan settings;
 - xiii. Documentation of all Startup, Shutdown, or Malfunction events; and
 - xiv. An explanation of any gaps in the data or missing data.
- d. An Odessa Alternate Limit for NO_x Emissions for Kiln 2 calculated based on the following formula:
- i. $X = \mu + 1.65\sigma$ where:
 - 1. X = 30-Day Rolling Average Emission Limit (lbs/Ton of clinker)
 - 2. μ = arithmetic mean of all of the 30-Day rolling averages
 - 3. σ = standard deviation of all of the 30-Day rolling averages, as calculated in the following manner:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2}$$

In no event shall Defendant propose an Odessa Alternate Limit for NO_x Emissions greater than 3.1lbs. NO_x/Ton of clinker.

CONSENT DECREE APPENDIX C
United States et al. v. CEMEX, Inc. et al.
Test-and-Set Protocol For NO_x Emission Limit at Odessa Kiln 1

Scope and Applicability

Defendant shall comply with the requirements contained in this Appendix regarding installation and optimization of selective non-catalytic reduction technology (“SNCR”) and in proposing a 30-Day Rolling Average Emission Limit for NO_x for Kiln 1 at the Odessa Facility.

SNCR Design, Installation, Optimization, and Demonstration Requirements

1. SNCR Design: Defendant shall design the SNCR system to deliver the ammonia to the exhaust gases at a maximum rate of at least 1.5 mols of reagent to 1.0 mols of NO_x (1.5:1 molar ratio based on available data), to deliver the reagent as close to the optimal temperature as possible, and consistent with vendor recommendations for the maximum reduction of NO_x emissions from the Kiln. The system shall be designed to inject ammonia into the Kiln exhaust gas stream based upon the ammonia slip measured by the ammonia CEMS.

2. Optimization Protocol:

- a. Defendant shall submit to EPA for approval pursuant to Section X (Review and Approval of Certain Deliverables) of the Consent Decree within 39 months from the Effective Date, a protocol (the “Optimization Protocol”) for optimizing any SNCR installed on Odessa Kiln 1, including optimization of the operational parameters resulting in the minimization of emissions of NO_x to the greatest extent practicable without violating any limits for other pollutants.
- b. The Optimization Protocol shall describe procedures to be used during the optimization period (“Optimization Period”) for Odessa Kiln 1 SNCR to adjust SNCR operating parameters, and shall include the following:
 - i. The method Defendant will use to calculate ammonia slip from Odessa Kiln 1;
 - ii. Measures to optimize the SNCR using the ammonia slip measurement at Odessa Kiln 1. These measures should include attempting to maintain an ammonia slip concentration of 5-10 ppm during the Demonstration Period; and,
 - iii. Measures taken if optimization of the SNCR at 5-10 ppm ammonia slip causes operational problems or excess emissions of another pollutant other than ammonia or NO_x. This could include optimization of the SNCR at a lower ammonia slip.

3. SNCR Optimization Period:

- a. Defendant shall make its best efforts to establish the optimized steady-state operation of the SNCR as soon as practicable while following the procedures established in the approved Optimization Report.
- b. The Optimization Period shall commence no later than 60 Operating Days following EPA approval of the Optimization Protocol.
- c. The Optimization Period shall be completed within 60 Operating Days, or 120 Days, of commencement, whichever is sooner.
- d. Defendant shall collect the following data during the Optimization Period. When submitted, Defendant shall provide the data to EPA in an electronic format consistent with and able to be manipulated by Microsoft Excel and explain the reasons for any data not collected:
 - i. Kiln flue gas temperature at the inlet to the fabric filter or at the Kiln stack (daily average);
 - ii. Kiln production in tons of clinker (daily total) and the method used to calculate Kiln production;
 - iii. Raw material feed in tons (daily total);
 - iv. Type and percentage of each raw material used (daily);
 - v. Daily average NO_x, SO₂, ammonia, and CO concentrations (ppm - dry basis) and mass rates;
 - vi. Flue gas volumetric flow rate (daily average in dry acfm);
 - vii. Feed burnability (C3S) (at least daily);
 - viii. Temperatures in or near the burning zone (daily average);
 - ix. Kiln system fuel feed rate and type of fuel by weight or heat input rate (calculated to a daily average);
 - x. Kiln amps (daily average);
 - xi. Kiln back end O₂ concentration (daily average);
 - xii. Kiln system draft fan settings;
 - xiii. Documentation of any Startup, Shutdown, or Malfunction events; and,

- xiv. An explanation of any gaps in the data or missing data.
- 4. Ammonia Monitoring: During the Optimization and Demonstration Period for Kiln 1, Defendant shall operate the ammonia CEMS at all times of Kiln Operation.
- 5. SNCR Optimization Report:
 - a. Within 60 Days following the end of the Optimization Period, Defendant shall submit to EPA for approval pursuant to Section X (Review and Approval) of the Consent Decree an optimization report (“Optimization Report”) for Odessa Kiln 1. The Optimization Report shall:
 - i. Demonstrate conformance with the Optimization Protocol for the Kiln and its associated SNCR system;
 - ii. Include all data collected during the SNCR Optimization Periods; and,
 - iii. Propose, for approval, consistent with the Optimization Protocol, the targeted ammonia slip for the Kiln and the SNCR system to be maintained during the Demonstration Period.
 - b. In identifying the optimized state of the SNCR, including the injection rates of reagents, and the operating parameters for the Facility processes, Defendant may take into account energy, environmental, and economic impacts.
 - c. The SNCR Optimization Report may also include a discussion of any problems encountered during the SNCR Optimization Period, and how that problem may impact the potential emission reductions.
 - d. In the event Defendant determines, prior to the expiration of the SNCR Optimization Period, that its ability to optimize the Kiln and/or its SNCR system will be affected by potential impairments to product quality, Kiln system reliability or increased emissions of other pollutants, then Defendant shall promptly advise EPA of this determination, and include these considerations as part of its recommendation in its Optimization Report.
- 6. Demonstration Period:
 - a. The Demonstration Period for Odessa Kiln 1 shall commence within 7 days after Defendant’s receipt of the final approval by EPA of the SNCR Optimization Report for the Kiln.
 - b. The Demonstration Period shall last 270 Operating Days. During the Demonstration Period, the Kiln shall be operated consistent with the

optimized operations of the Facility's processes and the SNCR system as approved by EPA as part of the Optimization Report.

- c. If Kiln operation is disrupted by excessive unplanned outages, or excessive startups and shutdowns during the Demonstration Period, or if the Kiln temporarily ceases operation for business or technical reasons, Defendant may request that EPA extend the Demonstration Period. EPA shall grant or deny the request and shall state the amount of time (if any) that the Demonstration Period may be extended, which decision is subject to the Section XI (Dispute Resolution) provisions of this Consent Decree. Defendant may not suspend Demonstration Period data collection until and unless EPA has granted the request.
- d. Subject to Section XIV (Dispute Resolution) and through written notice to Defendant, EPA may itself extend or reopen the Demonstration Period based upon a determination that additional data is needed to be able to adequately establish an emission limitation.
- e. If evidence arises during the Demonstration Period that product quality, Kiln system or reliability is impaired, then Defendant may, upon notice to, and approval by, EPA, temporarily modify Kiln operation and the SNCR system to mitigate the impairment and request that EPA suspend or extend the Demonstration Period for further technical evaluation of the effects of process optimization on the Kiln or SNCR system or, alternatively, permanently modify the manner of operation of the Kiln or SNCR system to mitigate the effects.
- f. During the Demonstration Period for Odessa Kiln 1, Defendant shall collect the data in this Appendix identified in paragraph 3.c.
- g. During the Demonstration Period for Odessa Kiln 1, Defendant shall continuously meet the limit of 5.3 lbs./ton of clinker set forth in Paragraph 23 of the Consent Decree.
- h. During the Optimization and Demonstration Periods, Defendant shall operate the Kiln in a manner necessary to produce a quality cement clinker product and shall use good air pollution control practices for minimizing emissions at all times.

7. Demonstration Report:

- a. Within 60 Days following completion of the Demonstration Period for Odessa Kiln 1 and its associated SNCR, Defendant shall submit a demonstration report to EPA ("Demonstration Report"). The Demonstration Report shall include all of the data collected during the Demonstration Period and the proposed 30-Day Rolling Average Emission Limit for NO_x for Odessa Kiln 1.
- b. For the purposes of the Demonstration Report:

- i. The 30-Day Rolling Average Emission Limit for NO_x for Odessa Kiln 1 shall be based upon an analysis of CEMS data and clinker production data collected during the Demonstration Period while the Facility's processes and SNCR system parameters were optimized.
 - ii. Total pounds of NO_x emitted during an individual Operating Day will be calculated from collected CEMS data for that Operating Day.
 - iii. Hours or days when the Kiln is not in Operation may be excluded from the calculation in Paragraph c. of this section. However, Defendant shall provide an explanation in the Demonstration Report for any data excluded and include the excluded data in the Demonstration Report.
- c. The proposed final 30-Day Rolling Average Emission Limit for NO_x for Odessa Kiln 1 shall be calculated in accordance with the following formula:

$X = \mu + 1.65\sigma$ where:

X = 30-Day Rolling Average Emission Limit (lbs/Ton of clinker)

μ = arithmetic mean of all of the 30-Day rolling averages

σ = standard deviation of all of the 30-Day rolling averages, as calculated in the following manner:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2}$$

- d. The proposed final 30-Day Rolling Average Emission Limit for NO_x for Odessa Kiln 1 shall be no less stringent than 5.3 lbs./ton of clinker, as specified in Table 1 of Paragraph 18 and in Paragraph 23 of the Consent Decree.